



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0987; Project Identifier MCAI-2021-01416-R]

RIN 2120-AA64

Airworthiness Directives; Airbus Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for all Airbus Helicopters Model AS350B, AS350BA, AS350B1, AS350B2, AS350B3, AS350D, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters. This proposed AD was prompted by an occurrence reported where during an inspection of a tail rotor head (TRH) pitch change spider, excessive play and excessive wear were detected, due to an unwanted rotating motion. This proposed AD would require, for helicopters with certain part-numbered TRH spider pitch change units installed, inspecting for correct installation of the spider pitch change nut (nut); marking a 2 to 5 mm wide black paint index mark and repetitively inspecting the alignment of the marking; and additional inspections and corrective actions if necessary. This proposed AD would allow an affected part to be installed on a helicopter if certain requirements of this proposed AD are met. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to www.regulations.gov. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Airbus Helicopters, 2701 North Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at www.airbus.com/helicopters/services/technical-support.html. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

Examining the AD Docket

You may examine the AD docket at www.regulations.gov by searching for and locating Docket No. FAA-2022-0987; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the European Union Aviation Safety Agency (EASA) AD, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Stephanie Sunderbruch, Aerospace Engineer, Safety Risk Management Section, Systems Policy Branch, Policy & Innovation Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-4659; email Stephanie.L.Sunderbruch@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2022-0987; Project Identifier MCAI-2021-01416-R” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to www.regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Stephanie Sunderbruch, Aerospace Engineer, Safety Risk Management Section, Systems Policy Branch, Policy & Innovation Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-4659; email Stephanie.L.Sunderbruch@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2021-0282, dated December 17, 2021 (EASA AD 2021-0282), to correct an unsafe condition for Airbus Helicopters (AH), formerly Eurocopter and Aerospatiale, Model AS 350 B, AS 350 BA, AS 350 BB, AS 350 B1, AS 350 B2, AS 350 B3, AS 350 D, AS 355 E, AS 355 F, AS 355 F1, AS 355 F2, AS 355 N, and AS 355 NP helicopters, all serial numbers. EASA advises that an occurrence was reported where, during an inspection of a TRH pitch change spider, excessive play in the assembly and excessive wear on its parts were detected, which was due to an unwanted rotating motion. This condition, if not addressed, could result in loss of the TRH pitch change control and loss of control of the helicopter.

Accordingly, EASA AD 2021-0282 requires a one-time check (inspection) of the nut for correct installation, accomplishing a black paint index marking, 2 to 5 mm wide, on the rotating spider and on the bearing spacer of the TRH spider pitch change unit, repetitive checks (inspections) of the marking alignment, and depending on the findings, accomplishment of additional inspections and corrective actions. The additional inspections include inspecting the TRH spider pitch change unit for corrosion; inspecting for rotation and wear on the faces of the bushes; visually inspecting the rotating plate and the rotating plate threads for damage; and inspecting the TRH spider pitch change unit if the mark is misaligned. The corrective actions include removing parts with corrosion from service; replacing bushes that rotate or have wear; and replacing damaged rotating plates. EASA AD 2021-0282 also specifies certain procedures for installation of the affected TRH spider pitch change unit.

FAA's Determination

These helicopters have been approved by EASA and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the European Union, EASA has notified the FAA about the unsafe condition described in its AD. The FAA is proposing this AD after evaluating all known relevant information and determining that the unsafe condition described previously is likely to exist or develop on other helicopters of the same type designs.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Airbus Helicopters Alert Service Bulletin (ASB) No. AS350-05.01.03, for Model AS350B, AS350BA, AS350B1, AS350B2, AS350B3, and AS350D helicopters and Airbus Helicopters ASB No. AS355-05.00.86, for Model AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters, both Revision 0 and dated December 16, 2021, which include Figure 1 that identifies the position of the TRH pitch change unit and of the bearing spacer to be marked with a 2 to 5 mm wide black paint index mark. The service information also specifies procedures for inspecting the condition and installation of the nut; and inspecting the application and alignment of the black index mark on the TRH pitch change unit and the bearing spacer.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

The FAA also reviewed, Airbus Helicopters Mechanical Repair Manual AS350 65-20-00-713, dated March 29, 2017, and Airbus Aircraft Maintenance Manual AS350 65-21-00, 4-9b, dated May 16, 2019, which specify disassembly and reassembly information for the TRH pitch change unit.

Proposed AD Requirements in this NPRM

This proposed AD would require, for helicopters with certain part-numbered TRH spider pitch change units installed, inspecting for correct installation of the nut; marking a 2 to 5 mm wide black paint index mark to identify the position of certain parts; and after the initial marking, and thereafter at intervals not to exceed 10 hours time in service, visually inspecting the alignment of the marking; and additional inspections and corrective actions if necessary. Additionally, this proposed AD would allow an affected part to be installed on a helicopter, if certain requirements of this proposed AD are met.

Differences between this Proposed AD and the EASA AD

EASA AD 2021-0282 applies to Model AS350BB helicopters, whereas this proposed AD would not because that model is not FAA-type certificated. EASA AD 2021-0282 requires accomplishing a certain inspection using a magnifying lens, whereas this proposed AD would require using a 5X or higher power magnifying glass to inspect instead.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 967 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this proposed AD.

Inspecting the nut for correct installation would take about 0.25 work-hour for an estimated cost of \$21 per helicopter and up to \$20,307 for the U.S. fleet.

Inspecting the alignment of the marking would take about 0.10 work-hour for an estimated cost of \$8.50 per helicopter per inspection and up to \$8,219.50 for the U.S. fleet per inspection.

Marking the position of the TRH pitch change unit with black paint would take about 0.25 work-hour for an estimated cost of \$21 per helicopter and \$20,307 for the U.S. fleet.

If required, inspecting the TRH spider pitch change unit for corrosion, inspecting the faces of the bushes for rotation and wear, and inspecting the rotating plate and rotating plate threads for damage would take about 13 work-hours for an estimated cost of \$1,105 per helicopter.

If required, replacing the bushes would take about 1 work-hour and parts would cost about \$5,918, for an estimated cost of \$6,003 per replacement.

If required, replacing the rotating plate would take about 1 work-hour and parts would cost about \$27,375 for an estimated cost of \$27,460 per replacement.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

Airbus Helicopters: Docket No. FAA-2022-0987; Project Identifier MCAI-2021-01416-R.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Airbus Helicopters Model AS350B, AS350BA, AS350B1, AS350B2, AS350B3, AS350D, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters, certificated in any category.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 6420, Tail Rotor Head.

(e) Unsafe Condition

This AD was prompted by an occurrence reported where, during an inspection of a tail rotor head (TRH) pitch change spider, excessive play and excessive wear were detected, due to an unwanted rotating motion. The FAA is issuing this AD to detect improper installation of the pitch change spider nut (nut) and improper alignment of a black index marking. The unsafe condition, if not addressed, could result in loss of the TRH pitch change control and loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) For helicopters with TRH spider pitch change unit, part number (P/N) 350A33-2030-00, 350A33-2167-00, or 350A33-2167-01 installed, within 50 hours time-in-service (TIS) after the effective date of this AD:

(i) Inspect the nut for correct installation. If the nut is missing or loose, before further flight, remove the bearing from the TRH spider pitch change unit and do the following:

(A) Inspect the TRH spider pitch change unit for corrosion. If there is any corrosion, before further flight, remove the affected part from service and replace with an airworthy part.

(B) Inspect for rotation and wear on the faces of the bushes. For the purposes of this AD, indications of rotation and wear include tearing, peening, metal pick-up, and hammering. If there is any rotation or any wear on the faces of the bushes, before further flight, remove the bushes from service and replace with airworthy bushes.

(C) Using a 5X or higher power magnifying glass visually inspect the rotating plate and the rotating plate threads for damage. For the purposes of this AD, indications of damage include wear, deformation, stripping, galling, and corrosion. If there is any damage on the rotating plate or the rotating plate threads, before further flight, remove the rotating plate from service and replace with an airworthy rotating plate.

Note 1 to paragraph (g)(1)(i): Airbus Helicopters Mechanical Repair Manual (MRM) AS350 65-20-00-713, dated March 29, 2017, also known as Work Card 65-20-00-713 MRM, and Airbus Aircraft Maintenance Manual (AMM) AS350 65-21-00, 4-9b, dated May 16, 2019, also known as Task 65-21-00, 4-9 AMM, specify disassembly and reassembly information for the TRH pitch change unit.

(ii) Identify the position of the TRH pitch change unit (a) and of bearing spacer (b) by marking a 2 to 5 mm wide black paint index mark (C) with black paint as depicted in Figure 1 of Airbus Helicopters Alert Service Bulletin (ASB) No. AS350-05.01.03, Revision 0, dated December 16, 2021 (ASB AS350-05.01.03), or Airbus Helicopters ASB No. AS355-05.00.86, Revision 0, dated December 16, 2021 (ASB AS355-05.00.86), as applicable to your model helicopter.

(iii) Within 10 hours TIS after the initial marking required by paragraph (g)(1)(ii) of this AD, and thereafter at intervals not to exceed 10 hours TIS, visually inspect the alignment of the marking. An example of a properly aligned marking is depicted in Figure 1 of ASB AS350-05.01.03 and ASB AS355-05.00.86, as applicable to your model helicopter. If the black paint index mark (C) is misaligned, before further flight, inspect the TRH spider pitch change unit by accomplishing the actions required by paragraphs (g)(1)(i) and (ii) of this AD.

(2) As of the effective date of this AD, do not install TRH spider pitch change unit P/N 350A33-2030-00, 350A33-2167-00, or 350A33-2167-01 on any helicopter, unless you do the actions required by paragraphs (g)(1)(i) and (ii) of this AD before further flight after installation, and thereafter do the actions required by paragraph (g)(1)(iii) of this AD at the times specified in paragraph (g)(1)(iii) of this AD.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (i)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(i) Related Information

(1) For more information about this AD, contact Stephanie Sunderbruch, Aerospace Engineer, Safety Risk Management Section, Systems Policy Branch, Policy & Innovation Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-4659; email Stephanie.L.Sunderbruch@faa.gov.

(2) For service information identified in this AD, contact Airbus Helicopters, 2701 North Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at www.airbus.com/helicopters/services/technical-support.html. You may view this referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(3) The subject of this AD is addressed in European Union Aviation Safety Agency (EASA) AD 2021-0282, dated December 17, 2021. You may view the EASA AD on the Internet at www.regulations.gov in Docket No. FAA-2022-0987.

Issued on July 27, 2022.

Christina Underwood, Acting Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2022-16396 Filed: 8/1/2022 8:45 am; Publication Date: 8/2/2022]